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The OCDQ—An Application and Some Implications

This article discusses an application of the Organizational Climate Description Questionnaire in a particular research situation and presents a critique of the instrument as a research tool. The author is Alabama Field Representative of the Southeastern Education Laboratory, Atlanta, Georgia. The research reported herein was supported by the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education, and Welfare. Cooperative Research Project No. S-435

It is the purpose of this article to discuss a recent research application of the Organizational Climate Description Questionnaire.[1] The OCDQ was employed as one of the major instruments in a doctoral study at Auburn University.[2] Reference to the total study will be limited to clarification and background purposes, as this article, hopefully, will speak directly to the application of the OCDQ to a particular research situation with emphasis given to the results obtained and the implications of these results in a critique of the OCDQ as a research instrument.

Background

As a basis for the subsequent discussions in this article, brief reference will be given to the development of the OCDQ. Reference to the descriptive publication of the study authored by Halpin and Croft will provide the reader with the complete background of the instrument. The OCDQ was developed by Halpin and Croft in a continuation of the situational approach to leader behavior which Halpin had investigated in an earlier work with the Leader Behavior Description Questionnaire (LBDQ) during the Ohio State Leadership Studies. The questionnaire consists of sixty-four items that may be used to establish the

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organizational climate as perceived by the members of the school's staff. The items are answered on a four-point, forced-choice scale: rarely occurs, sometimes occurs, often occurs, very frequently occurs. The OCDQ provides eight subtest or dimension scores, four of which describe the perceived teachers' behavior: Disengagement, Hindrance, Esprit, and Intimacy, and four of which provide dimensions of the principal's behavior as it is perceived by the members of his teaching staff: Aloofness, Production Emphasis, Thrust, and Consideration.

These eight subtest scores are utilized through the development of a profile of the school's organizational climate to classify the organizational climate of the school on a continuum from Open to Closed. The climate continuum, as defined by Halpin and Croft, has six possible classifications (Open, Autonomous, Controlled, Familiar, Paternal, Closed) which move from the desired and hypothesized effective Open Climate at one end to the less desirable Closed Climate at the other end.

In a concluding self-critique of their research effort which had produced the OCDQ, Halpin and Croft raised the question of validation of the instrument. Quoting directly from the summary publication of their work, the direction of their thinking in this area is reflected:

. . . to which we can only reply that at this point we have not been concerned about the relationship between the profile scores on the OCDQ and "external criteria" of a school's effectiveness. . . . Accordingly, we are not sure against what criteria we should seek to check the climate scores. We cannot rule out the possibility that the climate-profiles may indeed constitute a better criterion of a school's "effectiveness" than many measures that already have entered the field of educational administration with false passports, and which now masquerade as criteria.[3]

The researchers called for additional research which would possibly validate the OCDQ as a criterion for the organizational effectiveness of the public school organization. Efforts by Feldvebel,[4] Heller,[5] and Brown[6] have been in this direction and the current summary effort by Halpin[7] will certainly reveal similar research studies.

This possibility raised by Halpin and Croft that the OCDQ might provide a suitable criterion for measuring school effectiveness led to the selection of the OCDQ as the measurement instrument of school effectiveness. It was the feeling of the investigator that the Open Climate as developed and defined should certainly not be an impediment to the effective operation of the public school organization. Therefore, the major hypotheses of the study were based on the

assumption that the OCDQ has validity as a criterion of school effective-
ness. The study, specifically, investigated the relationship between the
psychological distance of school principals as measured by the *Assumed
Similarity of Opposites Scales* which were developed by Fred Fiedler[8]
and selected dimensions of the organizational climate of the school
organizations as measured by the OCDQ.

The study was limited to the Muscogee County School District of
Georgia. This district, in the year of the study—1964-65—encompassed
sixty schools with over fifty thousand pupils and more than seventeen
hundred professional staff members. Under the assumption that two
years is an adequate period of time for a principal to influence the
organizational climate of his school, the investigation was limited to
the fifty-five schools in which the present principals had been in that
position for at least two years. A favorable, voluntary response was
received from forty-eight of these schools.

During the time of the study, this large Southern school system was
in the process of racially desegregating its schools. While one school
in the system had experienced limited integration, all of the schools
involved in the study were still operating on a segregated basis.
Passing reference was given to this segregated status as a limitation
of the study. Subsequent analyses of the data revealed this factor to be
of significant importance in the relationships studied. The apparent
impact of this dual system of education which was reflected in the
result obtained on the OCDQ will be discussed later in this paper. Of
the forty-eight participating schools, thirty-one were white schools and
seventeen were Negro schools.

Degree of Participation

These forty-eight schools involved a total of 1236 professional edu-
cators—forty-eight principals and 1188 staff members—in the study. The
nature of the study required the 100 per cent participation of the
principals. This participation was obtained. Of the 1188 professional
staff members, 1089 or 92 per cent of them took part in the study.
The participation within individual school staffs ranged from a low of
72 per cent in one large secondary school to 100 per cent participation
obtained in twenty-one of the elementary schools.

The voluntary basis for participation in the study by staff members
within individual schools raised some questions for consideration. Is
it necessary that the responses to the OCDQ be obtained from all or

nearly all of the teachers in a given school situation? Seventy per cent or more participation in all schools was set for the inclusion of the total group of forty-eight schools. However, the variation in perceptions among staff members within individual school situations which have been revealed during the data analysis of the study has caused this researcher to question the acceptance of less than total participation. Due to the nature of the effort to establish a profile of a school's organizational climate with the OCDQ, a very high degree of participation, preferably 100 per cent, seems essential for valid results. The climate profiles are developed through an arithmetic mean process and the absence of responses from any staff members would mathematically affect the averaging process. Every staff member in some way contributes to the organizational climate of his school situation and his response should be considered in any effort to "map this climate."

The elementary schools, which included the major portion of the school sample, ranged in staff size from a small school with a seven-teacher staff to a large, double-session school with forty-five teachers. The mean staff size of the thirty-nine elementary schools was 19.80. The nine upper level schools had a mean staff size of 51.80, with a range from thirty to eighty-four staff members. The breakdown of staff sizes according to race revealed no significance according to this factor.

The forty-eight schools were visited individually by the investigator and the OCDQ and the other instruments employed in the study were administered personally by him. These individual visits to the schools and the subsequent contacts with the principals and staff members which normally occurred during the visits allowed the investigator an excellent opportunity to experience a feel for the intuitive notion which provided the impetus for the development of the OCDQ. Referring again to the summary publication of Halpin and Croft's work, one finds:

> The impetus for our research came from the common, though obvious observation that schools vary considerably in their Organizational Climates. As any teacher or school executive moves from one school to another he inexorably is struck by the differences he encounters in Organizational Climates. He voices his reaction with such remarks as, "You don't have to be in a school very long before you *feel* the atmosphere of the place."[9]

Perhaps the best illustration of the differences observed involves the manner in which the members of the teaching staffs came together as

a group to complete the OCDQ. These group meetings varied from an informal coming together of a group of professional teachers who were willing to participate in a research activity, to a tightly structured situation in which the teachers all "marched in" at the appointed time to participate in "something" at the direction of their principal.

The major portion of the data involved in the total study was obtained from the administration of the OCDQ to the principals and staffs of the forty-eight participating schools. For analysis, the principals' responses were not included with those of the staff members. This procedure enabled the researcher to establish separately the principal's perception and the staff's perception of the organizational climate for each school. These separate perceptions were obtained for comparison purposes in the analysis of the data.

The organizational climate designations obtained from the administration of the OCDQ to the staffs has been presented in summary form in Table 1. This table includes the initial sample of forty-eight school profiles grouped according to the six organizational climates. The six climates are arranged in the order of their appearance on the continuum developed by Halpin and Croft. The racial and grade classifications have been included for later reference.

TABLE 1

STAFF PERCEPTIONS—TOTAL SAMPLE OF FORTY-EIGHT SCHOOLS

	Elementary		Secondary	
	White	Negro	White	Negro
Open	4	4	0	0
Autonomous	6	2	0	0
Controlled	6	3	1	0
Familiar	6	0	0	0
Paternal	0	0	3	0
Closed	3	5	2	3
Totals	25	14	6	3

Halpin and Croft stipulated in their discussions of the OCDQ that a degree of agreement among staff members' perceptions of the climate of the school must be present before the global concept of the organizational climate could be considered valid.

Here we are confronted by the perennial phenomenological dilemma: each person is limited to seeing the world through only his own

perceptions. Yet we were prepared—and are still prepared—to take the
position that when a majority of the faculty group shows consensus
in its perception of a school's climate this consensus can be used as
a dependable index of what is "out there."[10]

The scoring program provides climate similarity scores and, hence, climate
designations for staff members were studied to determine the amount of
agreement that existed among the staff members of the school. This investi-
gation revealed twelve schools in which there was an absence of agree-
ment among staff members in their perceptions of their school's organi-
zational climate. Table 2, which follows, presents a summary of the staff
perceptions in these twelve schools.

TABLE 2

PROFILE ANALYSIS OF THE TWELVE SCHOOLS WITHOUT STAFF AGREEMENT OF PERCEPTION ON THE SCHOOL'S ORGANIZATIONAL CLIMATE

School No.	Climate Designations						Open Tend.	Closed Tend.
	Open	Aut.	Cont.	Fam.	Pat.	Closed		
5	8	3	4	6	4	7	15	17
9	2	4	0	4	0	3	6	7
10	6	3	5	2	3	10	14	15
12	2	0	13	1	4	9	15	14
14	5	5	3	4	10	3	13	17
16	1	2	1	1	0	3	4	4
20	5	2	2	4	1	2	9	7
21	3	1	11	1	5	5	15	11
29	5	3	1	2	2	6	9	10
32	4	0	2	2	3	4	6	9
41	2	0	11	0	4	13	13	17
43	6	4	9	4	6	8	19	18

In the preceding table, the climate designations were arranged from
Open to Closed as they appeared on the continuum. The number
under each climate designation represents the number of staff mem-
bers who viewed the school's climate in that manner.

For the purpose of this table on staff agreement, the terms Open
Tendencies and Closed Tendencies were introduced. Taking the mid-
point of the continuum as the point of division, the three climates of
Open, Autonomous, and Controlled are indicators of degrees of Open-
ness. Schools perceived as having Open, Autonomous, or Controlled
climates were deemed to have Open Tendencies. Conversely, the three

climates of Closed, Paternal, and Familiar are indicative of degrees
of Closed Tendencies.

The lack of agreement among staff members in these twelve schools
was evident from the table, as staff perception was almost equally
divided in each school between Open and Closed Tendencies.

Apparent Weakness in Middle Classifications

The closer inspection of these schools generated by a tabular break-
down revealed some significant points which are worthy of comments.
Of the twelve schools which lacked staff agreement in perception, nine
of the group received overall climate designations of either Controlled
(3) or Familiar (6)—the two middle classifications on Halpin's con-
tinuum. Apparently, these middle climate designations more or less
developed out of a chaos of perception rather than from any clearly
perceived organizational climate. This is a finding which seems to support
the early reservations raised by Halpin and Croft when they stated:

> We have said that these climates have been ranked in respect to
> Openness versus Closedness. But we fully recognize how crude this
> ranking is. As is the case in most methods of ranking or scaling,
> we are much more confident about the climates described at each
> end of this listing than we are about those described in between.[11]

It was of interest to note that of the twelve schools with a lack of
staff agreement, seven of these twelve schools were large elementary
schools that were conducting a double session program. This could be
interpreted as an indication that the double session schools—operating
with morning, afternoon, and all day shifts of teaching personnel—
do not have the continuity of organization present in the regularly op-
erated schools. The fact that the OCDQ was sensitive to this apparent
discontinuity in organization in these double session schools speaks
favorably for the instrument as a research tool.

With the removal of the twelve schools from consideration in the
analyses with respect to the global concept of the organizational climate,
the sample was reduced to thirty-six schools. The staff climate per-
ception, the racial classification, and grade designations for these thirty-
six schools are presented in Table 3.

Scrutiny of the information included in Table 3 provided the basis
for some points of discussion. The climate designations included in
the totals column indicate a tendency for Negro schools as a group to

TABLE 3

STAFF PERCEPTIONS—THIRTY-SIX SCHOOLS
WITH STAFF AGREEMENT OF PERCEPTION

	Elementary		Secondary		Totals	
	White	Negro	White	Negro	White	Negro
Open	4	4	0	0	4	4
Autonomous	5	1	0	0	5	1
Controlled	5	2	0	0	5	2
Familior	0	0	0	0	0	0
Paternol	0	0	2	0	2	0
Closed	3	5	2	3	5	8
Totols	17	12	4	3	21	15

be more Closed in their organizational climate than were the white schools. Eight of the fifteen Negro schools were perceived by the staffs to have the Closed organizational climate. On the other hand, only five of the twenty-one white schools received this extreme climate rating from their staffs. When one removes the secondary schools from consideration—all of which, as indicated, received staff ratings toward the Closed end of the scale—the trend toward Open Tendencies on the part of white elementary schools becomes more evident. Fourteen of the seventeen white schools received climate designations toward the Open end of the continuum, while only seven of the twelve Negro schools received such ratings.

This question of race as a significant discriminant upon the results obtained from the OCDQ was investigated further with the application of t and F analyses to the data. When race was employed as the discriminant variable upon the eight dimensions of the OCDQ, significant differences were obtained on the dimensions of Hindrance, Aloofness, and Consideration. The Negro schools were characterized by considerably greater staff feelings of Hindrance, and the Negro principals were perceived to be more Aloof and less Considerate than their white counterparts. In this analysis, the differences obtained for the dimensions of Disengagement and Production Emphasis also approached significance. The Negro school situations were depicted by greater feelings of staff Disengagement and more evidence of principal direction in staff behavior.

Since the OCDQ is based primarily upon the perceptions of the principal-staff relationships, the preceding conclusions indicated that

this relationship was perceived differently in white and in Negro schools. Apparently, the manner in which the principal relates to his staff must be different in Negro and in white schools.

This finding raised some interesting questions for the researcher. If, as Halpin has contended, the Openness of a school's organizational climate is a possible criterion of the school's operational effectiveness; the finding indicates that Negro schools possibly have been less effective as a group than the white schools. The findings re-emphasize the contention of many, that Negro public school education in the South has been inherently inferior to the education available to the white students in our segregated school system.

The findings have also raised the question of possible impacts upon the principal-staff relationships of steps to integrate school staffs and faculties under the current Civil Rights legislation. What are going to be the impacts upon the Negro teacher, adjusted to the more directed experiences in the Negro school, when he is moved to a school situation in which he is expected to exhibit more self-directed behavior?

No reference was made by Halpin and Croft to consideration being given to the racial factor during the development of the OCDQ. Certainly, the findings of this study indicate the need for some thought being given to this point.

Questionable Validity for Large Secondary Schools

As mentioned earlier and as shown in Table 3, the results obtained on the OCDQ for the nine secondary schools were heavily loaded toward the Closed end of the climate continuum. These findings have questioned the validity of the instrument for use with junior and senior high schools in a manner similar to the earlier research reported by Morris.[12]

Morris, working in the public schools of Alberta, Canada, employed the OCDQ in a descriptive study which classified 146 schools on the basis of their organizational climates. His study is unique in that it used the OCDQ on a Canadian school sample and in that the OCDQ was used to classify both elementary and secondary schools in the same study. With reference to this second point, Morris reported no attempt to adjust the OCDQ to the secondary school situation. The study was apparently conducted under the assumption that conditions were basically the same in a secondary school as in an elementary; therefore, no adaptation of the OCDQ was necessary. The findings of the Morris

study and of the current study lead to questioning of this assumption. In both cases, the secondary schools were found to be characterized by greater Closed tendencies than the elementary schools included in the studies.

The OCDQ was developed by Halpin and Croft for use in elementary schools, but Croft indicated by letter to this researcher that it was their thinking that the OCDQ was also valid for use with upper level schools. The current study was conducted under the assumption that the OCDQ had validity for use with schools beyond the elementary level.

Only one of the nine upper level schools involved in the study was perceived to have Open Tendencies in its organizational climate; a junior high school received a classification of a Controlled climate, but the absence of staff agreement in perception resulted in the subsequent deletion of the school from global climate considerations. Five of the eight remaining upper level schools received the extreme Closed rating, and the other three received the Paternal classification. Because of the investigator's previous associations with the schools involved in the study, his subjective evaluation caused him to question these results. The findings definitely made explicit the need to investigate the applicability of the OCDQ for use with the larger secondary schools.

Relating Global Climate Ratings to Selected Situational Variables

The supplementary investigation of the relationship between selected situational variables and the dimensions of the organizational climate has provided some interesting relationships. One of these gives possible insight into the question of the suitability of the OCDQ for upper level schools. Four situational variables associated with the position of school principals were considered in the study.

Situational variables related to the experience of a school principal total years' experience in education, and years as principal of his present school were not significantly related to any of the individual dimensions of the OCDQ or to the global concept of the Openness of the school's organizational climate. This finding possibly questions some of the current emphasis placed upon past experience when school principals are hired.

The age of the principals was found to be significantly related to only one of the variables—the OCDQ dimension of Production Emphasis. The negative relationship between these two variables is probably best explained as evidence of a decrease in activity of the principal with in-

creasing age. This tendency is readily observable among some of our older principals who are approaching retirement age.

The situational variable with the apparent greatest impact was school size, as indicated by the number of professional staff members reporting directly to the principal. Staff size was related significantly to five of the eight OCDQ dimensions. It was also the only situational variable which correlated significantly with the global concept of Openness of the organizational climate. While this situational variable was related in a significant manner to five of the eight OCDQ dimensions, its significant positive relationship to Disengagement coupled with its negative relationship to Esprit best illustrated the importance of staff size in the principal staff relationship.

The direction of these correlations revealed a definite tendency for the larger schools to be Closed in their organizational climates. This tendency has been noted and discussed earlier in this analysis, when only one of the nine secondary schools was perceived to have Open Tendencies. The significance of these findings with respect to the global concept of the organizational climate must be interpreted cautiously. The inclusion of the upper level schools, with naturally larger staffs, loaded the Closed Tendencies group with respect to staff size. However, a close comparison of the eight Open elementary schools with the eight Closed elementary schools produced findings in the same direction although they were not statistically significant.

The negative relationship between staff size and the global concept of Openness of the organizational climate has raised some question for the investigator. Is the negative direction of this relationship a possible explanation for the Closed climate ratings for the secondary schools? Is it more difficult for the larger school to receive an Open Climate rating due to the actual nature of the problems connected with the increased size of the school? Or, is the negative relationship obtained due to the nature of the measuring instrument—the OCDQ—which may have questionable validity for the larger school situation?

It became apparent to the investigator, as he moved among the schools during the data gathering phase of the study, that the teacher in the larger schools, primarily in the junior and senior high schools had greater difficulty in responding to some of the items on the OCDQ. Conversations with the teachers following the administration of the instrument revealed concern about their responses to items primarily due to their lack of a real basis for responding. They seemed to be uncomfortable with the forced-choice nature of the items. The items of

the Intimacy subscale received the most frequent comment in this regard. Several of the teachers expressed the need for a response choice which would take into consideration their lack of basis for responding. Such a choice when analyzed on a school-wide basis might provide some real understanding about the adequacy of communication within the school.

In investigating the relationship between the variables of the study and the Openness of the organizational climate of schools, the analysis was limited to the thirty-six schools in which staff agreement in perception was present. Two approaches to establishing correlation relationship were employed in this analysis, the Spearman Rank Order procedure and the Pearson Product-Moment method. The school ranks for use in the Spearman formula were obtained from the climate similarity scores produced by the OCDQ scoring program. Halpin's continuum from Open to Closed, along with school ranks within the individual climate groups, was used to establish a ranking of the schools from the most Open to the most Closed school. The product-moment correlations were calculated, using only the climate similarity, or the deviation score from the Open Climate, as the correlate in these computations. These two methods of ranking the schools on the global concept of Openness resulted in slightly different orders of rank. Theoretically, the two procedures should have produced equal rankings. The differences obtained apparently provide empirical support for Halpin's earlier concerns with the possible unreliability of the prototype climate profiles which should become more stable with the use of the OCDQ with additional samples of schools. The discrepancies in these rankings reinforce the previously discussed concern, raised by the findings of this study, with the middle points on the climate continuum.

As discussed previously in this analysis, the principals' scores on the OCDQ were processed separately from those of their staffs. For comparison purposes, a principal's profile and a staff's profile for each school were obtained. Several observations were made in regard to the degree of congruence between the perceptions of the principals and those of their school staffs. Of the forty-eight original schools involved in the study, the principal and staff global climate perceptions were in agreement only nine times. Three of these nine cases were schools in which the lack of agreement among staff members prevented the use of the schools in analysis related to the global concept of the organizational climate. A comparison of the climate perceptions of the principals and staffs in the remaining thirty-six schools is presented in Table 4.

TABLE 4

COMPARISON OF THE PRINCIPAL AND STAFF PERCEPTIONS
OF THE ORGANIZATIONAL CLIMATES
OF THE THIRTY-SIX SCHOOLS OF GROUP II

Climate	Principals' Perceptions	Staffs' Perceptions
Open	12	8
Autonomous	9	6
Controlled	7	7
Familiar	3	0
Paternal	2	2
Closed	3	13

Table 4 presented an obvious tendency on the part of the principals
to view schools as having the preferred Open Tendencies as defined by
Halpin. In an attempt to determine the statistical significance of this
difference in perception, the Chi-square technique was employed. Hal-
pin and Croft had indicated a belief that consensus obtained from the
school staff represented the best possible picture of reality. In applying
the Chi-square technique to this question of agreement in perception,
the assumption was made that the school principal should be aware of
the reality of his school situation. Therefore, the staff's perception, or
reality, was the expected frequency and the principal's perception was
taken as the actual frequency obtained. This Chi-square treatment re-
vealed significant differences in the perceptions of principals and their
staffs.

The supplementary analysis which focused upon the question of agree-
ment in perception between the principal and the members of his pro-
fessional staff of the school's organizational climate may have resulted in
the most thought-provoking conclusion from this application of the
OCDQ. If the assumption of Halpin and Croft that the staff consensus
in perception is a close picture of "reality" is valid, the findings of the
present study indicate that the principals are apparently not aware of
or "tuned-in" to the reality of their school situations. As might be expected,
the principals tended to view the organizational climates of their schools
as being more Open than Closed—the reverse of the tendency reported
on the part of school staffs. Brown[13] had reported the same tendency for
the principals who participated in his significant replicatory study.

These findings concerning the lack of agreement between the princi-
pals and their professional staffs raised some interesting questions. Are

the principals actually as unaware of the reality of their school situations as the findings seem to indicate? Or, are they more aware of the situation than their responses to the OCDQ revealed? Are the Open Tendencies in perception by the principals evidence of possible unconscious, defensive behavior of the principals, necessitated by their desire to have their schools pictured in the best light possible? Or, does this tendency of the principals indicate that they desire to view the school situations through "rose-colored glasses," even to the point of organizational failure?

Another line of thought raises the question of the possible effects of this disagreement in perception upon the organizational effectiveness of the schools. The results of some research reported by Cuba and Bidwell seem to indicate that such disagreement in perception is detrimental to the effectiveness of the school organization. They have concluded that effectiveness, satisfaction, and confidence-in-leadership have a marked relationship to coincidence of perceptions between teachers and administrations. In the words of the investigators: "Good staff relations can come about only when teachers and their administrators share, to a considerable extent, a common organizational world-view."[14] Such a common organizational viewpoint was not evidenced by the responses of the principals and staffs to the OCDQ in the current study.

This article, hopefully, has spoken directly to the application of the OCDQ in a particular research situation with emphasis given to a critique of the instrument as a research tool. The following points of discussion dealt with the instrument as a research tool: (1) the degree of staff participation necessary for reliable results; (2) the apparent weaknesses in the middle classifications on the climate continuum previously recognized by Halpin; (3) the questionable validity of the instrument for use with large secondary schools; and (4) the question of proper correlation procedures for establishing relationships between the global climate ratings and other selected variables.

Reference also was made, through the analyses of the obtained results, to the apparent sensitivity of the OCDQ as indicated by its reflection of differences in perception of staff members within a given school situation; differences in perception between the principal and the members of his professional staff; differences in the organizational climates in Negro and white schools; and its sensitivity to the organizational problems present in large elementary schools operated on a double session program. It is this sensitivity of the instrument in conjunction with the minor question raised during this application of the OCDQ that seems to indicate to this author that the OCDQ is a most promising

research tool and has opened new directions in the study of school organizations.

NOTES

1. A. W. Halpin and D. B. Croft, *Organizational Climate of Schools* (Chicago: Midwest Administration Center, University of Chicago, 1963).

2. J. F. Watkins, "The Relationship Between the Principal and His Professional Staff in the Public School," (Unpublished Ed.D. Dissertation, School of Education, Auburn University, 1966).

3. Halpin and Croft, *op. cit.*

4. Alexander M. Feldvebel, "The Relationship Between Socio-Economic Status of the School's Patrons, Organizational Climate of the School, and Pupil Achievement Level," (Unpublished Ph.D. Dissertation, Department of Education, University of Chicago, 1964).

5. Robert W. Heller, "Informal Organization and Perceptions of the Organizational Climate of Schools," (Unpublished Ed.D. Dissertation, School of Education, The Pennsylvania State University, 1964).

6. Robert J. Brown, "Identifying and Classifying Organizational Climates in Twin City Area Elementary Schools," (Unpublished Ph.D. Dissertation, Department of Education, University of Minnesota, 1964).

7. Andrew W. Halpin, "Change and Organizational Climate," *The Journal of Educational Administration*, (May, 1967), pp. 5-25.

8. Fred E. Fiedler, *Leader Attitudes and Group Effectiveness*, Urbana: University of Illinois Press, (1958).

9. Halpin and Croft, *op. cit.*

10. *Ibid.*

11. *Ibid.*

12. Derek V. Morris, "Organizational Climate of Alberta Schools," *Canadian School Administrator's Bulletin*, III (June, 1964).

13. Brown, *op. cit.*

14. E. G. Cuba and C. E. Bidwell, *Administrative Relationships,* Chicago: Midwest Administration Center, University of Chicago, (1957).